

## Upper Mississippi River National Wildlife and Fish Refuge

Established 1924

Compatibility Determination

Use: Sediment removal

Refuge Name: Upper Mississippi River National Wildlife and Fish Refuge (Refuge)

Establishing and Acquisition Authority(ies):

The Upper Mississippi River Wildlife and Fish Refuge was established by Public Law No. 268, 68th Congress on June 7, 1924. This act authorized acquisition of lands for Refuge purposes. Additional lands acquired in fee title by the U.S. Army Corps of Engineers are managed as part of the Refuge under a 1963 Cooperative Agreement between the Department of the Army and the Department of the Interior.

Refuge Purpose(s):

“The Refuge shall be established and maintained (a) as a refuge and breeding place for migratory birds included in the terms of the convention between the United States and Great Britain for the protection of migratory birds, concluded August 16, 1916, and (b) to such extent as the Secretary of the Interior by regulations, prescribe, as a refuge and breeding place for other wild birds, game animals, fur-bearing animals, and for the conservation of wild flowers and aquatic plants, and (c) to such extent as the Secretary of the Interior may, by regulations, prescribe a refuge and breeding place for fish and other aquatic animal life.”

National Wildlife Refuge System Mission:

“The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

Description of Use:

The natural processes of erosion, transport, and deposition of sediments have occurred throughout geologic times and have shaped the landscape of the Upper Mississippi River and its tributaries. Eroded soil is the largest pollutant of surface waters in the

United States. Sediment transport affects water quality and its suitability for wildlife sustainability and recreation, among other uses. Problems associated with deposition of sediments vary. Filling of backwaters, smothering of vegetation and mussel beds, loss of capacity for floodwater storage, and reduced navigation are examples.

A variety of Best Management Practices (BMPs), aimed at reducing the amount of sediment reaching the Upper Mississippi River, are now being implemented in a number of tributaries. These BMPs can be categorized as either structural or non-structural.

Among the structural best management controls include wet detention-sediment detention basins, constructed wetlands, dry detention basins, and construction of grassed channels and drainageways. Non-structural controls include street sweeping, public education, construction site erosion control regulations and enforcement, and stormwater management and land use planning.

One structural BMP has been constructed on the Refuge, with others in the planning stage. The 21-acre Pool A of the Upper Halfway Creek Marsh Project, completed in 1999, is a constructed wetland managed as a moist soil unit and sediment detention basin. Much of the sediment entering the project area is removed in this pool, resulting in less sediment reaching Halfway Creek Marsh. The periodic removal of sediment from this pool is an ongoing maintenance requirement. At several sites, sediment is also removed from collection points along tributaries. Although not engineered, these function as sediment detention basins. There is also the occasional need to remove flood-deposited sediment from selected locations or to remove spoil left in wetland basins from past ditching operations.

#### Availability of Resources:

For most projects, the cost to the Service for removing sediment should be minimal. Local landscapers have a need for small amounts of fill for beneficial uses and are willing to remove the sediment at no cost to the Service. Before a structural BMP is constructed on the Refuge as part of watershed initiative, a maintenance agreement would be completed that identifies the partners responsible for long-term maintenance and how sediment removal will be addressed. When the Service initiates a project to remove flood-deposited sediment or spoil left from past ditching operations, every effort will be made to minimize costs by finding beneficial uses for the material.

#### Anticipated Impacts of the Use:

The impacts to the Refuge in removing sediment should be minimal and temporary. There may be the occasional need to construct temporary roads and staging areas to

access sites with heavy equipment and transport fill or to store equipment or fill. These would be located to minimize the impacts on vegetation or other resources. Site restoration would also be part of any operation.

Most of any sediment removal operation would likely occur during the drier times of year in late summer and fall, or when the ground is frozen in winter for better access. Disturbance to nesting wildlife would be avoided by conducting operations at this time of year. If the project dictates sediment removal during the nesting season or other sensitive time periods, reducing disturbance to wildlife and avoiding other sensitive areas would be planned into the project.

Sediments, particularly fine-grained sediment, have the potential to carry and store pollutants such as metals, PCBs, and semi-volatile and volatile organic compounds. Removing these sediments may result in the re-suspension of any pollutants present.

Depending on the situation and type of sediment present, sampling may be required prior to the removal of any sediment.

#### Public Review and Comment:

A draft of this Compatibility Determination was included in the Draft Comprehensive Conservation Plan and Environmental Impact Statement (EIS) released May 1, 2005 for a 120-day comment period. It was also available during a subsequent 90-day review period on a supplement to the EIS released December 3, 2005. Public notification included notices in the Federal Register, media announcements, and 31 public meetings and workshops attended by more than 3,700 persons. No comments specific to this use or determination were received.

#### Determination:

\_\_\_\_ Use is Not Compatible

\_xx\_ Use is Compatible with Following Stipulations

#### Stipulations Necessary to Ensure Compatibility:

To ensure compatibility with Refuge purposes and the mission of the National Wildlife Refuge System, any sediment removal project on the Refuge must meet the following stipulations:

1. The project is conducted in accordance with local, state and federal regulations unless the U.S. Fish and Wildlife Service places additional restrictions on the

activities to ensure compliance with all applicable laws, regulations, and policies. The latter may be outlined in a letter of authorization from the Project Leader or a Special Use Permit depending on the complexity of the project.

2. Sediment removed from the Refuge would not be used to fill wetlands or other sensitive areas.

3. Sediment detention basins would only be constructed on the Refuge following evaluation of alternative erosion control and stormwater management practices in the watershed.

4. Any sediment removal project will be subject to modification if on-site monitoring by Refuge personnel uncovers unanticipated negative impacts to natural communities, wildlife species, or their habitats.

**Justification:**

Sedimentation is one of the most critical resource problems affecting impounded areas within the Upper Mississippi River System (Report to Congress: An Evaluation of the

Upper Mississippi River System—Environmental Management Program). As the navigation pools continue to age, the quality and quantity of habitat available will diminish. Likely responses to pool aging include poorer water quality, poorer substrata quality, reductions of submerged aquatic plants and benthic invertebrates, shifts in fish populations to less describable species, and fewer areas available to support the needs of migratory birds. In order to maintain habitat quality, active management is necessary. Watershed initiatives and sediment removal are among the tools available to manage sediment. The above-mentioned stipulations should provide management flexibility if detrimental impacts develop. Disturbance to wildlife during removal operations will be short-term and minimized by timing and duration. Allowing this use also furthers the mission of the National Wildlife Refuge System by providing renewable resources for the benefit of the American public while conserving fish, wildlife, and plant resources, while contributing to the purposes of the Refuge through the improvement of habitat.

Signature: Refuge Manager: \_\_\_\_\_

(signature and date)

Concurrence: Regional Chief: \_\_\_\_\_

(signature and date)

Mandatory 10- or 15 year Re-evaluations Date: \_\_\_\_\_